Combatting Desertification in Kenya

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[Photo: Small village in Kenya]

Conservative estimates suggest that one billion hectares of the world's land surface — an area slightly larger than Canada — is suffering some degree of desertification, a process whereby productive land becomes seriously eroded. And some researchers believe the true figure is three times higher.

Pastoralists and farmers, most of them poor, are struggling to make a living from these lands, yet face the reality that the soil is being further degraded by their actions.

10-year initiative

Figuring out ways of stopping — and even reversing — the desertification process is the aim of the Desert Margins Program (DMP), a major 10-year-long initiative involving researchers in nine sub-Saharan countries. The International Development Research Centre (IDRC) is supporting this program through funding for studies in three participating countries: Kenya, Burkina Faso, and Botswana.

The main objective is to reduce poverty among the people who live in desertified areas. "Food security is the ultimate goal," states Henry K. Cheruiyot, leader of the DMP Kenya team.

First step

The team's first step involved documenting the status of potential research sites, with an eye to assessing future environmental changes. In Kenya, scientists from the Kenyan Agricultural Research Institute and the Kenya Forestry Research Institute are working in two locations: Marsabit district in the northeast and Turkana district in the northwest, which are both about 550 kilometres from Nairobi.

The Turkana site is a relatively undisturbed riverine forest. However, the number of people living nearby is rapidly expanding — partly due to the establishment of a large refugee camp. Researchers believe the vegetation will likely be over-exploited in the coming years, resulting in desertification. Moreover, this site is at risk of drought every other year, on average.

Marsabit site

At Kargi, the research site in Marsabit district, the land has already been severely degraded due to a large influx of population beginning in the 1950's. Kargi was the location of a missionary centre, which drew a disproportionately large number of people to a relatively small amount of land. The villagers there rely heavily on trees for firewood, leading to soil erosion. "It is a community that has destroyed its own environment," says Dr Cheruiyot.

Despite that assessment, the Kenyan researchers aren't defining the communities' problems on their behalf. "What we do is not to interfere with them at all," explains Dr Cheruiyot. "What we do is give them ideas."

Participatory research

Using participatory research techniques, he and his colleagues have asked the villagers to rank their own concerns. Based on these results, the DMP Kenya team decided that its main objectives at Kargi will involve rehabilitating the land, reducing soil erosion, and increasing vegetation cover. The community proposed its own solutions: frequently switching grazing areas to allow vegetation to recover, enforcing rules against chopping down trees, and creating a larger number of watering holes to reduce the degradation around existing ones. Capitalizing on indigenous knowledge on ways to prevent desertification is an important part of the program, stresses Dr Cheruiyot.

In Turkana, a week-long participatory research session held in November 1998 amassed a wealth of knowledge about the community, including data on family sizes, labour activities, factors that contribute to poverty, traditional uses of the forest, government assistance, and alternative sources of income.

Pastoralist community

In this pastoralist community, land is owned 'in trust' by elders. Through community leaders, the elders allocate land to different families. Unfortunately, the local farmers have allowed the land to be over-grazed and, not surprisingly, have seen the land change over time. To address this problem, the community has formed environment committees whose role is to conserve and protect natural resources through rules and regulations.

Turkana villagers have also told the research team that they would like to shift away from their pastoral traditions and reduce their dependence on livestock by cultivating seeds. While only a small number of farmers are cultivating crops now, the rest of the community is watching with interest and eagerly awaiting the results of the experiment, reports Dr Cheruiyot.

Bottom-up approach

Although the Desert Margins Program is still in its early stages, Dr Cheruiyot says the work underway in Kenya is a good example of the DMP's bottom-up approach — an approach that experts believe is essential if the world is going to make any progress toward stopping desertification.

Mike Crawley is a Canadian journalist who visited Kenya for the Gemini News Service on a fellowship funded by IDRC. (Photo: C. Harris, IDRC)

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